

# Daily GLOWBUGS

## Digest: V1 #11

via AB4EL Web Digests @ SunSITE

Purpose: building and operating vacuum tube-based QRP rigs

[AB4EL Ham Radio Homepage @ SunSITE](#)

---

%%%% GlowBugs %%%%% GlowBugs %%%%% GlowBugs %%%%% GlowBugs %%%%%

---

**Subject: glowbugs V1 #11**

**glowbugs**

**Saturday, April 19 1997**

**Volume 01 : Number 011**

---

Date: Fri, 18 Apr 1997 14:24:00 -0600

From: Alex Mendelsohn <alexm@pennwell.com>

Subject: FW: 8874's

Glenn:

Depending on what he pays for the amp, it might be worth buying it for the components, power supply, enclosure, etc! Then again, at the PAWA hamfair here in Portland, Maine last week, there was a beautiful commercial RF deck for sale in an unbelievably environmentally hardened case, for a pair of 4-400s or 3-500Zs, or what have you. The asking price there was \$70, sans power supply parts.

Vy 73, Alex, AI2Q in Kennebunk, Maine .-.-.

-----

From: Glenn Finerman

To: ALEXM; Multiple recipients of list

Subject: 8874's

Date: Friday, April 18, 1997 8:48AM

A good friend of mine is looking at a used Alpha 76 which uses 8874's. He had a few questions which he asked me to post to the group of tube experts (woops! I used the "E" word!!!). I told him this group is as close as you're gonna get!

After he checked the AES catalog (Amateur Electronic Supply) and saw that a replacement pair of these tubes will run almost \$1000, he has some reservations about buying the amp. I noticed those prices are for Eimac tubes. Are 8874's available from Svetlana for less \$\$ ??? Are they available from ANYBODY for less than Eimac's??

I know you folks in the broadcast industry are used to such high cost tubes, but \$1000 for 2 tubes? WHEW!!. I thought I read a recent post about an article in QST outlining a mod to amps that use these tubes to use 3CX400's ?? Not sure about that.....

What should he do? I know Alpha makes a great amp and I don't want

to advise him to buy an Ameritron. He will be mainly using the amp to amplify a low power plate modulated AM transmitter and some SSB.

HELP??

73.....Glenn N2BJG gfiner@nms.com

---

Date: Fri, 18 Apr 1997 14:24:00 -0600  
From: Alex Mendelsohn <alexm@pennwell.com>  
Subject: 30 Amps needed

Hello all:

Is there anyone out there that has a 30 A at 5 V filament transformer they'd like to part with? I just finished building a pair of 4-400As in a dedicated 160 meter amplifier, and the transformer I've got in there now is running warm; it's a tad overloaded.

Any help would be appreciated.

Many thanks es vy 73, Alex, AI2Q in Kennebunk, Maine .-.-.

---

Date: Fri, 18 Apr 1997 16:02:05 -0400  
From: "Ornitz, Barry" <ornitz@eastman.com>  
Subject: RE: XFMR CORE SATURATION

Everybody's answering their own questions lately. :-)

Transformers are designed to have a coefficient of coupling of close to unity for audio and power transformers. Air wound coils at RF can be used as autotransformers, but are generally used for just their inductance. Shorting a few turns lowers the inductance of the remaining coil but since the coefficient of coupling of air wound coils is much less than unity, the effect is not as great as it would be in a power transformer. [Most folks are not used to thinking that a tapped coil can be viewed as two independent coils with a mutual inductance.]

When we think of a "slug-tuned" coil today, we generally think of a ferrite rod being moved in and out of the coil. The ferrite has a permeability much greater than air so sliding it into the coil increases the inductance. However, solid or silver-plated brass slugs were often used in the past. Inserted into a coil, they acted as a shorted turn and they reduced the inductance of the coil. The percentage decrease in inductance was usually far less than the percentage increase in inductance with ferrite slugs, thus leading to a decline in their popularity.

>From: bill@skeeter.frco.com [SMTP:bill@skeeter.frco.com]

>

>Now that's interesting. I know you can't short turns on an audio xfmr ...

>

>But I've seen some RF amps where there appears to be a tap that shorts out part of the coil to change bands. Can you do that at RF? Maybe

>because it's air core?  
>

---

Date: Fri, 18 Apr 1997 17:23:00 -0600  
From: Alex Mendelsohn <alexm@pennwell.com>  
Subject: FW: 30 Amps needed

Thanks Spencer. Appreciate your response. Well, like so many of the gang, we have to use what we have! I thought about using a setup like what you describe, but didn't have the right transformer for that either! :-)

Vy 73, Alex, AI2Q in Kennebunk, Maine

PS - Tks fer the nice comments too. The amp turned out well. It uses a pair of 8188s, which are pulse rated 4-400As. Also put a Jennings vacuum relay in the changeover circuit. No proble with arc-ing there. HI HI.

-----  
From: Spencer Petri  
To: Alex Mendelsohn  
Subject: Re: 30 Amps needed  
Date: Friday, April 18, 1997 4:15PM

Alex,

Although I don't have a transformer, I do have a suggestion. Use a 6.3 volt transformer with a power resistor in the primary to drop the secondary voltage to 5VAC. In this one fell swoop you get a more common transformer and inrush protection at the same time.

In my 6 mtr 4-1000A amp I use a 12 VAC output transformer, 240VAC secondary, with a resistor in each side of the primary and a 120VAC variac on one side wired in series with the transformer primary. This gives adjustment and current protection.

Sounds like a nice amp.

Just a thought.

At 02:24 PM 4/18/97 -0600, you wrote:

>  
>Hello all:  
>  
> Is there anyone out there that has a 30 A at 5 V filament  
>transformer they'd like to part with? I just finished building a pair of  
>4-400As in a dedicated 160 meter amplifier, and the transformer I've got in  
  
>there now is running warm; it's a tad overloaded.  
>

>Any help would be appreciated.

>

>Many thanks es vy 73, Alex, AI2Q in Kennebunk, Maine .--.

>

73 de Pete WA5JCI

\*\*\*\*\*  
EM-21--6 Mtr -- WAS #490, WAC CW, DXCC/91 Countries, VUCC/618 Grids

\*\*\*\*\*  
2 Mtr -- 36 States -- VUCC/183 Grids  
\*\*\*\*\*

---

Date: Fri, 18 Apr 1997 17:23:00 -0600

From: Alex Mendelsohn <alexm@pennwell.com>

Subject: FW: HQ-120

Hi Eric and nice to meetcha!

I use a 6L6 colpitts oscillator on 80 and 40. It uses a Type 80 rectifier for some semblance of authenticity and a VR-150 on the screen. No chirp, but I can "pull" the freq. with my hand on the plug-in coil. That's great fun when signing off.

I also built a 42-47 two toober regen, which works best on 80 meters.

C'mon over sometime and take a looksee. I've worked the west coast and the caribbean many times with the little 8 watter!

BTW: the schematics for my rigs are available as OrCAD files, and are posted on one of the glowbug web sites; I forget which one.

Vy 73, Alex, AI2Q in Kennebunk, Maine .--.

-----  
From: 'EWOODMAN@SMTP <EWoodman@aol.com>'

To: Alex Mendelsohn

Subject: HQ-120

Date: Friday, April 18, 1997 4:12PM

Hi Alex,

Just noticed your comment on the Glowbug List:

>I have a 1938 Hammarlund HQ-120 here that I use quite a bit, and use it  
>competitively in the Antique Wireless Association's annual Old Timer Radio  
>tests. It's a great receiver.

That's what I have for my "tube station" receiver. It's definitely a good rig. Mine is in really good electrical shape. Cosmetically it's so-so. Had to put in a new bandspread dial and the front panel needs some help. The paint was really worn so someone decided to try to color it with a black magic marker. Can't imagine doing that to a nice old radio. I can put up with a worn panel but this is UGLY. I'd like to repaint it but don't see any way to do it and keep the lettering. Too bad it isn't engraved. At least then maybe the letters could be filled in with paint. Oh well, guess I'll have to put up

with the ugliness.

By the way, what do you use for old transmitters? Just curious. I've got an old homebrew, vfo-controlled 80M rig, a homebrew replica of a 1930's Hartley for 160 and an old Knight T-150 for AM. I'm over in New Hampshire. Maybe we'll work each other someday.

73 Eric KALYRV

---

Date: Fri, 18 Apr 1997 17:23:00 -0600  
From: Alex Mendelsohn <alex@pennwell.com>  
Subject: FW: 30 Amps needed

Thanks for your speedy reply Bill. I too, use variacs here quite a bit, but there's no "secondary" on an autotransformer. Can you kindly give me a few more details about your variac modifications?

vY 73, Alex, AI2Q in Kennebunk, Maine .-.-.

-----  
From: William L. Fuqua III  
To: Alex Mendelsohn  
Subject: Re: 30 Amps needed  
Date: Friday, April 18, 1997 3:33PM

I usually never have a shortage of filament transformers. I pick up old variacs and wind my own secondary using the old variac core and winding (primary). On the larger variacs it takes about 2 to 3 turns per volt. If I decide to change amplifier tube types I just rewind the secondary I put on the variac.

73  
Bill

At 02:24 PM 4/18/97 -0600, you wrote:

>  
>Hello all:  
>  
> Is there anyone out there that has a 30 A at 5 V filament  
>transformer they'd like to part with? I just finished building a pair of  
>4-400As in a dedicated 160 meter amplifier, and the transformer I've got in  
  
>there now is running warm; it's a tad overloaded.  
>  
>Any help would be appreciated.  
>  
>Many thanks es vY 73, Alex, AI2Q in Kennebunk, Maine .-.-.  
>  
>

William L. Fuqua III P.E. E-mail WLFUQU00@POP.UKY.EDU Phone (606)  
257-4155  
Department of Physics and Astronomy CP-177 Chem. Phys. Bldg.  
University of Kentucky , Lexington, Ky 40506-0055

---

Date: Fri, 18 Apr 1997 23:33:02 +0000  
From: Sandy W5TVW <ebjr@worldnet.att.net>  
Subject: Trouble!

Sorry for this. Anybody had anything directed my way today, try it again!

My hard drive barfed on me!

73,  
E. V. Sandy Blaize, W5TVW  
"Boat Anchors collected, restored, repaired, traded and used!"  
417 Ridgewood Drive,  
Metairie, LA., 70001  
ebjr@worldnet.att.net  
\*\*Looking for: 860 tubes, WL-460 tubes\*\*  
\*\*Butternut HF2V antenna, G-R test gear.....\*\*

---

Date: Sat, 19 Apr 1997 07:07:52 +0000  
From: "Brian Carling (Radio G3XLQ / AF4K)" <bry@mnsinc.com>  
Subject: 300 watts out on 40m

Did anyone else see the design for a 300-500 watt CLASS-E amplifier shown in QST this month?

Seems like it would be just what we are looking for to clear the ether when the SSB boys show up and jam the frequencies below 7060 kc.

OK, I know it is solid stats, but with such a small parts count and low cost, it might be a reasonable quick & easy alternative for a few of us out here!

73 - de AF4K, Bry  
\*\*\*\*\*  
\*\*\* 73 from Radio AF4K / G3XLQ in Gaithersburg, MD USA \*  
\*\* E-mail to: bry@mnsinc.com \*  
\*\*\* See the great ham radio resources at: \*  
\*\* <http://www.mnsinc.com/bry/> \*  
\*\*\*\*\*

---

Date: Sat, 19 Apr 1997 07:07:58 +0000  
From: "Brian Carling (Radio G3XLQ / AF4K)" <bry@mnsinc.com>  
Subject: Re: FW: HQ-120

On 18 Apr 97 at 17:23, Alex Mendelsohn spoke about FW: HQ-120 and said:

>  
> Hi Eric and nice to meetcha!  
>  
> I use a 6L6 colpitts oscillator on 80 and 40. It uses a Type 80  
> rectifier for some semblance of authenticity and a VR-150 on the

> screen. No chirp, but I can "pull" the freq. with my hand on the  
> plug-in coil. That's great fun when signing off.

He he - I will have to try that here!

I can do the same pulling, while putting my hand near the crystal on  
some of my open-chassis QRP tube xmtrs, he he!

> BTW: the schematics for my rigs are available as OrCAD files, and  
> are posted on one of the glowbug web sites; I forget which one.  
>  
> Vy 73, Alex, AI2Q in Kennebunk, Maine .-.-.

What web sites????

They weren't in the message & I would like to see them!!

Thanks - Bry, AF4K

```
*****  
*** 73 from Radio AF4K / G3XLQ in Gaithersburg, MD USA *  
** E-mail to: bry@mnsinc.com *  
*** See the great ham radio resources at: *  
** http://www.mnsinc.com/bry/ *  
*****
```

---

Date: Sat, 19 Apr 1997 07:13:30 +0000

**From:** "Brian Carling (Radio G3XLQ / AF4K)" <bry@mnsinc.com>

**Subject:** Re: Fast xtal delivery!

Nothing wrong with a dipole Tom!! I look forward to hearing that 6T9  
rig!

Am planning to eventually build up this 6GW8 rig here myself!

Also have some 6BM8 so I am well fixed for triode-pentode power QRP  
chirpers!

I am sending in my crystal order this week to John, so will look for  
you on the now-standard xtal frequencies he is producing for us!

72.5 - Bry, AF4K

p.s. NOTE: Please post your messages to the new GB list at:  
glowbugs@www.atl.org  
and not just theporch. Thanks!

On 18 Apr 97 at 17:57, Tom R. Rice spoke about Fast xtal delivery!  
and said:

> Surprise! In the mailbox this morning was found  
> a package from Phoenix Crystals with my 40-meter  
> set. Pretty durned good service, I'd say, as I mailed  
> the order on April 4th.  
>  
> Gimme a few more days to get the 6T9 rig finished  
> and there'll be some gb activity from out here in  
> CA land, even if with just a li'l ole dipole.  
>

\*\*\*\*\* More "Odds-N-Ends" for sale (AGAIN)(REVISED)\*\*\*\*\*  
Following items for sale or trade. Most items are "vintage radio/  
boat anchor" items from the vacuum tube era!! Some prices readjusted  
from previous post. I need to move it all out! (To make room for



newer "old" stuff, of course!)

BRITISH "AVO 8" Mk III Multimeter. Very accurate! Works very well, with resistance range extension unit and instruction/service manual (copies). Cosmetically VERY nice except for one hairline crack in meter glass window. (Does not affect operation!) This is the British "Roll-Royce" version of the Simpson 260! With additional "Resistance range extension unit" (Originally cost \$95 alone!) BEST OFFER over \$125! or TRADE?

EICO 377 Sine/square wave generator. Covers 20 to 200,000 Hz in 4 ranges continuously. (Not 'step' tuning) working OK. Case needs paint. With photocopy of manual. \$15 plus shipping/packing.

SIDEBAND ASSOCIATES SBA-312 Commercial Xtal controlled SSB transceiver. With crystals for 2,4,6,8,12, and 16 Mhz channels (Some old simplex marine frequencies) It runs 100 watts out and is semi-solid state. (Transmitter uses a pair of 6KD6 tubes) 115 VAC power supply built in. Photocopy of book, no mike. Cosmetically good, a few scuffs, needs to be cleaned up. Worked OK last time used. (was an 'antenna tuner' test RF source in the shop I used to work in.) \$75 plus shipping/packing.

HEWLETT PACKARD 614A and 616A RF Generators. The 614 covers 780-2200 Mhz and the 616A covers 1750-4400 Mhz. The 614A works fine last time I tried it! The 616A has a bad power transformer (I think) and needs some tubes (Tubes still in the RF cavities though!) I must get these out from underfoot! \$10 for BOTH to the first person to show up and pick them up! New Orleans area. I must move these out.

LAMPKIN model 105B Frequency Meter. No documents. Works. Cosmetically good. \$15 plus shipping.

The following tubes: All are NOS except as marked. (Prices negotiable)  
34 ea. 25Z5G, 19 ea 14A7, 2 ea. 14B6, 6 ea. 14C5, 3 ea 14F7, 10 ea. 14H7,  
10 ea. 14R7, 1 ea. 14AF7, 1 ea. 7A8, 1 ea. 7B6, 1 ea. 7B7, 1 ea 7B8, 15 ea.  
7C5, 1 ea. 7Q7, 1 ea (pull-out) 8122, 8 ea. 8156, 6 ea. 4657, 2 ea 8560, 6  
ea 7984,  
5 ea. 5894, 13 ea. 1625 (some new, some pull-outs), 5 ea 12GE5, 9 ea. 6080,  
6 ea. ECH35, 2 ea 6528, 1 ea. 4-125(pull-out), 2 ea 4E27.

I am open to trades. WHAT HAVE YOU?  
Looking for General Radio test equipment,  
Hallicrafters: SX-71 receiver, S-76 receiver, SX-100 receiver.

B&W "TVL" or "HDVL" coils for 160, 80, 40 meters  
+ Jackbar and swinging link assy. to match.

73,

E. V. Sandy Blaize, W5TVW

"Boat Anchors collected, restored, repaired, traded and used!"

417 Ridgewood Drive,

Metairie, LA., 70001

ebjr@worldnet.att.net

\*\*Looking for: 860 tubes, WL-460 tubes\*\*

\*\*Butternut HF2V antenna, G-R test gear.....\*\*

---

Date: Sat, 19 Apr 1997 19:10:03 -0500 (GMT-0500)

From: Mike Toneri <toneri@ils.net>

**Subject: Re: 300 watts out on 40m**

At 07:07 AM 4/19/97 +0000, Brian Carling (Radio G3XLQ / AF4K) wrote:

>Did anyone else see the design for a 300-500 watt CLASS-E

>amplifier shown in QST this month?

>

>Seems like it would be just what we are looking for to clear the

>ether when the SSB boys show up and jam the frequencies below 7060

>kc.

>

>OK, I know it is solid stats, but with such a small parts count and

>low cost, it might be a reasonable quick & easy alternative for a few

>of us out here!

>

>73 - de AF4K, Bry

How about if I just switch the Viking 500 to 7050 or better still, use the Thunderbolt?

73...Mike VE3FGU

\*\*\*\*\*

Mike & Lynda Toneri E-mail: toneri@ils.net

\*\*\*\*\*

---

End of glowbugs V1 #11

\*\*\*\*\*

%%%% GlowBugs %%%% GlowBugs %%%% GlowBugs %%%% GlowBugs %%%%

[AB4EL Ham Radio Homepage @ SunSITE](#)

---

Created by **Steve Modena, AB4EL**

Comments and suggestions to **modena@SunSITE.unc.edu**

---